

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A disk mounting hub for mounting a disk having opposite parallel faces between a disk outside diameter and a coaxial disk inside diameter defining a central opening therethrough, wherein said disk mounting hub comprises:

a cylindrical hub body defining a hub outside diameter disposed along a central axis;

a cylindrical disk mounting member disposed coaxial with said central axis at one end of said body, defining the mounting member inside diameter extending proximally from said one end of said body, and sized to be received through said disk opening, and;

a coaxial hub face extending about said mounting member, said coaxial hub face defining a conical surface of revolution symmetrical about said central axis, that is disposed at an oblique hub face angle Ω relative to said central axis; and

wherein said interior central portion of said disk bends toward said conical surface of said coaxial hub face at said oblique hub face angle Ω and away from parallel to the remaining exterior portion of said disk, while said remaining exterior portion of said disk remains disposed within an acute disk coning angle limit Φ_{min} relative to a perpendicular to said central axis.

2. (Previously presented) The disk mounting hub of claim 1, wherein said disk mounting hub receives said disk mounted perpendicular to said central axis and fitted with said disk inside diameter around said mounting member inside diameter with one disk face proximal and adjacent to said coaxial hub face.

3. (Previously presented) The disk mounting hub of claim 2, wherein a clamping force F is applied toward said coaxial hub face from said opposite disk face over an interior central portion of said opposite disk face.

4. (canceled)

5. (Previously presented) The disk mounting hub of claim 1, wherein said oblique hub face angle Ω is selected to form a hub face having a concave conical surface contour.
6. (Withdrawn)
7. (previously presented) The disk mounting hub of claim 1, in which said disk mounting hub comprises at least one hub material selected from the group consisting of aluminum and steel.
8. (Previously presented) The disk mounting hub of claim 3,
wherein said disk attaches to said disk mounting hub by applying said clamping force F through a clamp adapter to said opposite face of said disk.
9. (Previously presented) The disk mounting hub of claim 8, wherein said clamp adapter is arranged to exert said clamping force F on said disk surface toward said disk mounting hub.
10. (Previously presented) A hard disk drive, including: said a disk mounting hub of Claim 1.
11. (Previously presented) The hard disk drive of claim 10, wherein:
said disk mounting hub receives said disk perpendicular to said central axis and fitted with said disk opening around said cylindrical disk mounting member with one of said faces proximal and adjacent to said coaxial hub face.
12. (Previously presented) The hard disk drive of claim 11, wherein: a clamping force F is applied and distributed toward said coaxial hub face from an opposite of said face over an interior central portion of said opposite face.

13. (Previously presented) The hard disk drive of claim 12, wherein: said interior central portion of said disk bends toward said conical surface of said coaxial hub face surface at said oblique hub face angle Ω and away from parallel planarity with the remaining exterior portion of said disk, while said remaining exterior portion of said disk remains disposed within an acute disk conning angle limit Φ_{\min} relative to a perpendicular to said central axis.

14. (Previously presented) The hard disk drive of claim 10, wherein said oblique hub face angle Ω is selected to form a said coaxial hub face having a concave conical surface contour.

15. (Withdrawn)

16. (Previously presented) The hard disk drive of claim 10, in which said disk mounting hub comprises at least one hub material selected from the group consisting of aluminum and steel.

17. (Previously presented) The hard disk drive of claim 10, further including:
said disk attached to said disk mounting hub by applying said clamping force F through a clamp adapter to said opposite face of said disk.

18. (Previously presented) The hard disk drive of claim 17, wherein said clamp adapter is arranged to exert said clamping force F on said opposite face toward said disk mounting hub.

19. (Withdrawn)

20. (Withdrawn)

21. (Withdrawn)

22. (Withdrawn)

23. (Withdrawn)

24. (Withdrawn)

25. (Withdrawn)

26. (New) A hard disk drive, including:

a disk mounting hub for mounting a disk having opposite parallel faces between a disk outside diameter and a coaxial disk inside diameter defining a central opening therethrough, wherein said disk mounting hub comprises:

a cylindrical hub body defining a hub outside diameter disposed along a central axis;

a cylindrical disk mounting member disposed coaxial with said central axis at one end of said body, defining the mounting member inside diameter extending proximally from said one end of said body, and sized to be received through said disk opening, and;

a coaxial hub face extending about said mounting member, said coaxial hub face defining a conical surface of revolution symmetrical about said central axis, that is disposed at an oblique hub face angle Ω relative to said central axis; and

wherein said interior central portion of said disk bends toward said conical surface of said coaxial hub face surface at said oblique hub face angle Ω and away from parallel planarity with the remaining exterior portion of said disk, while said remaining exterior portion of said disk remains disposed within an acute disk conning angle limit Φ_{\min} relative to a perpendicular to said central axis;

wherein said disk mounting hub receives said disk perpendicular to said central axis and fitted with said disk opening around said cylindrical disk mounting member with one of said faces proximal and adjacent to said coaxial hub face;

wherein a clamping force F is applied and distributed toward said coaxial hub face from an opposite of said face over an interior central portion of said opposite face;

wherein said interior central portion of said disk bends toward said conical surface of said coaxial hub face surface at said oblique hub face angle Ω and away from parallel planarity with the remaining exterior portion of said disk, while said remaining exterior portion of said disk remains disposed within an acute disk conning angle limit Φ_{\min} relative to a perpendicular to said central axis.

27. (New) The disk mounting hub of claim 26, wherein said disk mounting hub receives said disk mounted perpendicular to said central axis and fitted with said disk inside diameter around said mounting member inside diameter with one disk face proximal and adjacent to said coaxial hub face.

28. (New) The disk mounting hub of claim 27, wherein a clamping force F is applied toward said coaxial hub face from said opposite disk face over an interior central portion of said opposite disk face.

29. (new) The disk mounting hub of claim 28, wherein said interior central portion of said disk bends toward said conical surface of said coaxial hub face at said oblique hub face angle Ω and away from parallel to the remaining exterior portion of said disk, while said remaining exterior portion of said disk remains disposed within an acute disk conning angle limit Φ_{\min} relative to a perpendicular to said central axis.

30. (New) The disk mounting hub of claim 26, wherein said oblique hub face angle Ω is selected to form a hub face having a concave conical surface contour.

31. (New) The disk mounting hub of claim 26, in which said disk mounting hub comprises at least one hub material selected from the group consisting of aluminum and steel.

32. (New) The disk mounting hub of claim 28,

wherein said disk attaches to said disk mounting hub by applying said clamping force F through a clamp adapter to said opposite face of said disk.

33. (New) The disk mounting hub of claim 32, wherein said clamp adapter is arranged to exert said clamping force F on said disk surface toward said disk mounting hub.

34. (New) The hard disk drive of claim 26, wherein said oblique hub face_angle Ω is selected to form a said coaxial hub face having a concave conical surface contour.

35. (New) The hard disk drive of claim 26, in which said disk mounting hub comprises at least one hub material selected from the group consisting of aluminum and steel.

36. (New) The hard disk drive of claim 26, further including:

said disk attached to said disk mounting hub by applying said clamping force F through a clamp adapter to said opposite face of said disk.

37. (New) The hard disk drive of claim 36, wherein said clamp adapter is arranged to exert said clamping force F on said opposite face toward said disk mounting hub.